

Algebra Maintenance #8

Part 2.7 – Absolute Value Equations and Inequalities

_____ 47) Which compound inequality has the same meaning as $|x + 4| < 8$?

A) $-12 < x < 4$

B) $-12 > x > 4$

C) $x < -12$ or $x > 4$

D) $x > -12$ or $x < 4$

_____ 48) Which of the following is a solution of $|2 - x| < 4$?

A) -2

B) -1

C) 6

D) 7

_____ 49) Solve: $|x - 7| + 5 = 17$

A) $\{-19, 5\}$

B) $\{-5, 5\}$

C) $\{-5, 12\}$

D) $\{-5, 19\}$

_____ 50) The ideal diameter of a metal rod for a lamp is 1.25 inches with an allowable error at most 0.005 inches. Which rod below would NOT but suitable?

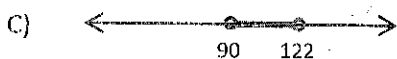
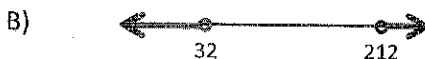
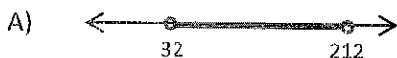
A) a rod with diameter 1.249 inches

B) a rod with diameter 1.251 inches

C) a rod with diameter 1.253 inches

D) a rod with diameter 1.355 inches

_____ 51) Water is in a liquid state if its temperature t , in degrees Fahrenheit, satisfies the inequality $|t - 122| < 90$. Which graph represents the temperature describes by this inequality?



Part 2.8 – Cumulative Review

_____ 52) Which equation is NOT equivalent to the others?

A) $\frac{x}{4} = 3$

B) $4x = 12$

C) $\frac{4x}{4} = 12$

D) $12 = x$

_____ 53) What is the value of the expression $12 - 4 \times 2 + 8 \div 4$?

A) 6

B) 3

C) 18

D) 30

_____ 54) Which expression has a value of 21?

I. $(5+4) \times 5 + 15 \div 5$

II. $5 + (4 \times 5 + 15) \div 5$

III. $5 + 4 \times (5 + 15) \div 5$

A) I

B) II

C) III

D) None of them

_____ 55) Evaluate the expression $-3xy^2$ for $x=3$ and $y=4$.

A) -36

B) -144

C) -72

D) 72

_____ 56) Which equation is NOT equivalent to the others?

A) $\frac{m+n}{p} = q$

B) $m+n=qp$

C) $n = \frac{qp}{m}$

D) $m = pq - n$

_____ 57) If $2\left(\frac{x}{2}-1\right) = 4$ and $3(y-1) = 2+2y$, which of the following is true?

A) $x=3$ and $y=3$

B) $x=5$ and $y=5$

C) $x=6$ and $y=1$

D) $x=6$ and $y=5$

_____ 58) Half of the money collected at a show was donated to charity. Tickets cost \$100 per pair. The charity received \$3500. How many pairs of tickets were sold?

A) 70

B) 700

C) 350

D) 1400

_____ 59) Which of the following is a solution to the equation $\frac{x}{2} + \frac{2x}{3} = 2$?

A) $\frac{10}{3}$

B) $\frac{12}{7}$

C) $\frac{2}{7}$

D) $\frac{12}{5}$

_____ 60) Solve: $15a = 22 + 4a$

A) 11

B) 2

C) -11

D) -2

_____ 61) If $7x+3=24$, find the value of $5-4x$.

A) -23

B) -7

C) 1

D) 17

_____ 62) Which of the following can be represented by this graph?



A) $5 < b < 11$

B) $11 \geq b \geq 5$

C) $|8-b|=3$

D) $|b-8| = -3$